

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/FI 03/00281

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B29C 45/37, B29D 11/00, H05K 5/00  
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B29C, B29D, H05K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI DATA, EPO-INTERNAL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Week199722 Derwent Publications Ltd., London, GB; Class A32, AN 1997-240388 & JP 9076302 A (TOHOKU MUNEKATA KK), 25 March 1997 (1997-03-25) figures 1-10; abstract	1, 3, 7
Y	--	2, 4-6, 8-18

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

30 June 2003

Date of mailing of the international search report

03 -07- 2003

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PCT/FI 03/00281

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 07, 31 July 1997 (1997-07-31) & JP 9076302 A (TOHOKU MUNEKATA KK) 25 March 1997 81997-03-25) figures 1-10; abstract	1,3,7
Y	--	2,4-6,8-18
Y	WO 0017968 A1 (XIRCOM, INC.), 30 March 2000 (30.03.00), page 4, line 14 - line 19, abstract	4,5
Y	--	
Y	DE 9109086 U1 (KILIM, RAFAEL), 14 January 1993 (14.01.93), page 2, line 19 - line 25, figure 1, abstract	2
Y	--	
Y	US 6159397 A (DEAN FRIEDMAN), 12 December 2000 (12.12.00), column 2, line 7 - line 30, figure 1, abstract	2,6,8-13
Y	--	
Y	WO 9120178 A1 (MANNESMANN KIENZLE GMBH), 26 December 1991 (26.12.91), page 4, line 8 - line 22, abstract	14-18
Y	--	
A	EP 0881871 A2 (SHARP KABUSHIKI KAISHA), 2 December 1998 (02.12.98), figure 3, abstract	14-18
A	--	
A	US 2001/0053067 A1 (MICHAEL WORTMAN), 20 December 2001 (20.12.01), figure 1, abstract	14-18
A	--	

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International application No.

**PCT/FI 03/00281****C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5160832 A (THOMAS G. HUBERT ET AL), 3 November 1992 (03.11.92), figure 1, abstract  -- -----	1-18

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

02/06/03

International application No.  
PCT/FI 03/00281

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
WO	0017968	A1	30/03/00	AU	3647699 A	10/04/00
				CN	1328718 T	26/12/01
				EP	1116306 A	18/07/01
				JP	2002525828 T	13/08/02
				TW	434946 B	00/00/00
				US	6095851 A	01/08/00
				US	6241550 B	05/06/01
				US	2001027055 A	04/10/01
-----						
DE	9109086	U1	14/01/93	NONE		
-----						
US	6159397	A	12/12/00	NONE		
-----						
WO	9120178	A1	26/12/91	AT	126653 T	15/09/95
				AU	7906991 A	07/01/92
				BR	9105790 A	04/08/92
				DE	9006598 U	23/08/90
				DE	59106267 D	00/00/00
				EP	0486664 A,B	27/05/92
-----						
EP	0881871	A2	02/12/98	CN	1102332 B	26/02/03
				CN	1204229 A	06/01/99
				JP	3323881 B	09/09/02
				JP	10335864 A	18/12/98
				TW	454434 B	00/00/00
				US	6229507 B	08/05/01
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US	2001/0053067	A1	20/12/01	NONE		
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US	5160832	A	03/11/92	NONE		
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